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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of)
Paul Richard) Examiner: Omar F. Sanchez
For: Safety Razor with Pivot Point)
Shift from Center to Guard-Bar) Group Art Unit: 3724
Under Applied Load)
Serial No.: 09/820,378)
Filed: March 28, 2001) Our Docket No.: 6579-0416

Middletown, Connecticut, February 7, 2005

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Commissioner for Patents
P.O. Box 1450
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APPEAL BRIEF

S I R:

This is an appeal to the Board of Appeals from an Office Action mailed September 9, 2004 marked "final" in which the Examiner finally rejected claims 1, 5-12, 20, and 24-34 of the above-identified application. A Response to the final Office Action was filed on November 9, 2004, and an Advisory Action was mailed on November 24, 2004. Appellants timely filed a Notice of Appeal on December 7, 2004. Therefore, the due date for filing the Appeal Brief is February 7, 2005. This brief is being filed in support of that Notice of Appeal.

As required by 37 C.F.R. §1.192, this brief is being filed in triplicate.

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I. REAL PARTY IN INTEREST

The real party in interest in this Appeal is Eveready Battery Company of St. Louis, Missouri.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interference proceedings known to Appellants, Appellants' legal representatives, or assignee that would directly affect or be directly affected by or have a bearing on the decision of the Board of Patent Appeals and Interferences in this Appeal.

III. STATUS OF CLAIMS

Claims 1, 5-12, 20, and 24-34 are pending. Claims 1, 5-12, 20, and 24-34 have been finally rejected.

IV. STATUS OF AMENDMENTS

Proposed amendments to claims 7 and 32 were submitted on November 9, 2004, in the Response to the final Office Action. In the Advisory Action mailed on November 24, 2004, the Examiner indicated that the proposed amendments would not be entered because they allegedly raise new issues that would require further consideration and/or search. An Amendment addressing the Section 112, second paragraph, rejections is filed with this Appeal Brief.

V. SUMMARY OF INVENTION

The invention as defined by claim 1 is directed to a shaving system having a pivot frame 14, 14', a pivot assembly 12, and a blade assembly 10. (Page 7, line 34, to page 8, line 1.) The pivot assembly 12 and the blade assembly 10 are pivotally coupled to the pivot frame 14, 14' for movement relative to the pivot frame about a system axis spaced from the pivot frame and the pivot assembly. (Office Action Response of May 19, 2004, first paragraph inserted at page 9, line 33.) The blade assembly 10 is pivotally coupled to the pivot assembly 12 for movement between first and second positions relative to the pivot assembly. First

biasing means (biasing spring 11, shown in Figure 7) act between the blade assembly 10 and the pivot assembly 12 for urging the blade assembly toward and to the first position. (Office Action Response of May 19, 2004, second paragraph inserted at page 9, line 33.) Second biasing means (cantilevered biasing member 50' and cam follower 52', shown in Figures 9 and 10) act between the pivot assembly 12 and the pivot frame 14, 14' for resisting pivotal movement of the pivot assembly and the blade assembly 10 in at least one direction of rotation about the system axis. (Page 8, lines 24-28.) The system axis is generally coaxially aligned with one part of the blade assembly 10 when the blade assembly is in its first position and generally coaxially aligned with another part of the blade assembly when the blade assembly is in its second position. (Office Action Response of May 19, 2004, fourth paragraph inserted at page 9, line 33.) (See also Figure 7, which illustrates the blade assembly 10 in the first position and the system axis coincident with the leading edge of the center blade 22 in the blade assembly, and Figure 8, which illustrates the blade assembly in the second position and the system axis coincident with the guard bar 18.)

The invention defined by claim 20 is directed to a triple blade shaving system (Figures 1, 2, and 6-11) having a pivot frame 14, 14', a pivot assembly 12 pivotally coupled to the pivot frame 14, 14', and a blade assembly 10. (Page 7, line 34, to page 8, line 1.) The blade assembly 10 is pivotally coupled to the pivot assembly 12. First biasing means (biasing spring 11, shown in Figure 7) act between the blade assembly 10 and the pivot assembly 12. (Office Action Response of May 19, 2004, second paragraph inserted at page 9, line 33.) Second biasing means (cantilevered biasing member 50' and cam follower 52', shown in Figures 9 and 10) act between the pivot assembly and the pivot frame. (Page 8, lines 24-28.) The blade assembly 10 includes a guard-bar 18 and three blades (shown at 20, 22, and 24). (Page 8, lines 1-2.) The blade assembly 10 further defines a shave plane (Figures 7, 8, 10, and 11) and also pivots relative to the pivot assembly 12 between a first position and a second position. (Office Action Response of May 19, 2004, second paragraph inserted at page 9, line 33.) When in the first position, pivotal movement of the pivot assembly 12 relative to the pivot frame 14, 14' in response to a shaving force applied to the blade assembly 10 causes pivotal movement of the blade assembly about a center axis of the blades, substantially on the shave plane. (Page 8, line 33, to page 9, line 1.) When in the second position, pivotal movement of the pivot assembly 12 relative to the pivot frame 14, 14' in response to a shaving force applied to the blade assembly 10 causes pivotal movement of the blade assembly substantially on the shave plane and about a guard-bar axis G of the blade assembly. (Page 9, lines 1-11, as amended in the Office Action Response of May 19, 2004.)

The invention defined by claim 24 is directed to a shaving system having a blade assembly 10, a pivot assembly 12, and a pivot frame 14, 14'. (Page 7, line 34, to page 8, line 1.) The pivot assembly 12 supports the blade assembly 10 for movement between first and second positions. (Office Action Response of May 19, 2004, second paragraph inserted at page 9, line 33.) The pivot frame 14, 14' supports the pivot assembly 12 for pivotal movement about a virtual pivot axis (Office Action Response of May 19, 2004, first paragraph inserted at page 9, line 33) substantially coincident with one part of the blade assembly 10 when the blade assembly is in the first position and substantially coincident with another part of the blade assembly when the blade assembly is in the second position (Office Action Response of May 19, 2004, fourth paragraph inserted at page 9, line 33). The blade assembly 10 and the pivot assembly 12 are pivotally movable about the virtual pivot axis in response to shaving force applied to the blade assembly. (Office Action Response of May 19, 2004, fourth paragraph inserted at page 9, line 33.)

The invention defined by claim 29 is directed to a shaving system having a pivot assembly 12, a pivot frame 14, 14', and a blade assembly 10 having a guard-bar 18 and a blade group including a plurality of blades. (Page 7, line 34, to page 8, line 1.) The pivot frame 14, 14' supports the pivot assembly 12 for limited pivotal movement about a virtual axis spaced from the pivot frame and the pivot assembly. (Office Action Response of May 19, 2004, fourth paragraph inserted at page 9, line 33.) The blade assembly 10 is supported on the pivot assembly 12 for pivotal movement between first and second positions relative to the pivot assembly. The blade assembly 10 also includes one part thereof coaxially aligned with the virtual axis when the blade assembly is in the first position and another part thereof coaxially aligned with the virtual axis when the blade assembly is in the second position. (Office Action Response of May 19, 2004, second paragraph inserted at page 9, line 33.)

VI. ISSUES

A. The first issue is whether claims 7 and 32 are patentable within the meaning of 35 U.S.C. §112, second paragraph.

B. The second issue is whether claims 1, 5-7, 9, 11, 12, and 24-28 are patentable within the meaning of 35 U.S.C. §102(e).

C. The third issue is whether claims 8, 10, 20, and 24-34 are patentable within the meaning of 35 U.S.C. §103(a).

VII. GROUPING OF CLAIMS

- A. Claims 1 and 5-12 stand or fall together.
- B. Claim 20 stands or falls alone.
- C. Claims 24-28 stand or fall together.
- D. Claims 29-34 stand or fall together.

VIII. ARGUMENT

A. Claims 7 and 32 are patentable within the meaning of 35 U.S.C. 112, second paragraph

1. The Examiner's rejection of claim 7 under 35 U.S.C. 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter regarded as the invention is improper.

In the final Office Action of September 9, 2004, the Examiner alleged that claim 7 was indefinite because it allegedly failed to particularly point out and distinctly claim the subject matter regarded as the invention. In particular, the Examiner alleged that it was not clear what the phrase "allows pivot movement of said pivot assembly in only one direction of rotation" encompassed. The Examiner suggested that the phrase "allows pivotal movement of" be changed to -- biases --.

In the Response to the final Office Action filed on November 9, 2004, Appellants amended claim 7 in accordance with the Examiner's suggestion.

As stated above, the Examiner refused entry of the amendment of claim 7. Because the claim was amended as suggested by the Examiner, the claim does not suffer from the defect alleged by the Examiner. An Amendment addressing the Section 112, second paragraph, rejections (the rejections of claims 7 and 32) is filed with this Appeal Brief. Appellants, therefore, respectfully request that the amendment of claim 7 be entered and the rejection of claim 7 based on 35 U.S.C. §112, second paragraph, be withdrawn.

2. The Examiner's rejection of claim 32 under 35 U.S.C. 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter regarded as the invention is improper.

In the final Office Action of September 9, 2004, the Examiner alleged that claim 32 was indefinite because it allegedly failed to particularly point out and distinctly claim the subject matter regarded as the invention. In particular, the Examiner alleged that it was not clear what the phrase “virtual axis is substantially disposed within said shave plane” encompassed and that the Figures illustrate that the virtual axis is below and not within the shave plane.

In the Response to the final Office Action filed on November 9, 2004, claim 32 was amended to recite the virtual axis being disposed on the shave plane. Basis for amending the claim in such a manner is found in Figures 7, 8, 10, and 11 of the drawings as originally filed. All of those Figures illustrate two axes (C and G) that are on the shave plane (i.e., positioned on a tangent line drawn through the tips of the blades). Both of those axes are coincident with virtual (or system) axes, which are described in an Office Action response dated May 19, 2004.

The Examiner alleges that the amendment of claim 32 in which the word “within” has been changed to -- on -- raises a new issue that requires further consideration or search. Because Appellants have consistently shown in the drawings axes that are positioned “on” the shave plane, Appellants respectfully submit that the amendment does not raise a new issue. As stated above, an Amendment addressing the Section 112, second paragraph, rejections (the rejections of claims 7 and 32) is filed with this Appeal Brief. Appellants, therefore, respectfully request that the amendment of claim 32 be entered and the rejection of claim 32 based on 35 U.S.C. §112, second paragraph, be withdrawn.

B. Claims 1, 5, 6, 7, 9, 11, 12, and 24-28 are patentable within the meaning of 35 U.S.C. §102

1. The Examiner’s rejection of claims 1, 5-7, 9, 11, and 12 under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,442,850 to Coffin. (hereinafter “Coffin”) is improper.

The Examiner improperly rejected independent claim 1.

As noted above, the invention as defined by claim 1 is directed to a shaving system having a pivot frame, a pivot assembly pivotally coupled to the pivot frame for movement relative to the pivot frame about a system axis spaced from the pivot frame and the pivot

assembly, a blade assembly pivotally coupled to the pivot assembly for movement between first and second positions relative to the pivot assembly, first biasing means acting between the blade assembly and the pivot assembly for urging the blade assembly toward and to the first position, and second biasing means acting between the pivot assembly and the pivot frame for resisting pivotal movement of the pivot assembly and the blade assembly in at least one direction of rotation about the system axis. The system axis is generally coaxially aligned with one part of the blade assembly when the blade assembly is in its first position and generally coaxially aligned with another part of the blade assembly when the blade assembly is in its second position.

In contrast, Coffin is directed to a shaving razor having a reusable assembly and a replaceable blade cartridge having at least one razor blade. The reusable assembly includes a sub-seat, a guard element mounted on the sub-seat, a housing, and a slider. The replaceable blade cartridge is pivotally attached to the sub-seat. The sub-seat is pivotally supported by two arms extending from the housing such that the sub-seat is capable of rotation about a horizontal axis. A spring is positioned on one of the arms to bias the sub-seat about the horizontal axis. The sub-seat is also connected to the slider, the slider being an elongated cylindrical portion that is received in a slot in the housing to allow the pivotally attached sub-seat (and the pivotally attached replaceable blade cartridge) to slide toward and away from the housing. The slider is pivotal about an axis positioned in the housing.

Coffin fails to disclose, teach, or suggest a shaving system in which a pivot assembly is pivotally coupled to a pivot frame for movement relative to the pivot frame about a system axis that is spaced from the pivot frame and the pivot assembly, as recited in claim 1. More specifically, in the Coffin device the slider is pivotal about the housing, but the axis that enables this pivotal motion (which is shown and described in the Coffin reference as “axis 26”) is in the housing and is not spaced from the housing. In Appellants’ device as recited in claim 1, the system axis is defined in text inserted into the specification and entered in the Office Action Response of May 19, 2004, which describes the pivot frame being cooperative with the pivot assembly “to form a shell bearing which supports the pivot assembly 12 for arcuate rocking movement on and relative to the pivot frame 14 about a virtual axis or system pivot axis located above both the pivot frame and the pivot assembly.” (Emphasis added). Thus, in Appellants’ device, the cooperation of the pivot frame and the pivot assembly via the shell bearing surfaces enable the system axis to be spaced from the pivot frame and the pivot assembly. In Coffin, the disclosed device includes the axis 26 which allows for pivotal movement of the sub-seat and blades relative to the housing via the slider, but the axis 26 is a

simple axle and not shell bearing surfaces. Because the axis in the Coffin device is simply an axle and not shell bearing surfaces, a system axis or virtual axis of the Coffin device is placed directly at the axle and necessarily cannot be spaced from the housing or, as in Appellants' device, be spaced from the pivot frame. Appellants assert that the spacing of the system axis, as recited in claim 1, is patentably distinct from a structure in which the axis is located at the housing and remains within the housing, as in Coffin.

Furthermore, Coffin fails to disclose, teach, or suggest a shaving system having a system axis that is generally coaxially aligned with one part of the blade assembly when the blade assembly is in a first position and generally coaxially aligned with another part of the blade assembly when the blade assembly is in a second position, as recited in claim 1. As stated above, in the Coffin device, the system axis (axis 26) is always in the slot in which the slider is mounted. Accordingly, the system axis (axis 26) can never be coaxially aligned with the blade assembly. Appellants respectfully assert that the coaxial alignment of the system axis with one part of the blade assembly when the blade assembly is in a first position and generally coaxially aligned with another part of the blade assembly when the blade assembly is in a second position, as recited in claim 1, is patentably distinct from a structure in which the system axis is within the housing, as in Coffin.

To anticipate a claim under 35 U.S.C. §102, a single reference must disclose each and every element of the claimed invention. Absence from the reference of any claimed element negates anticipation. Because Coffin fails to disclose, teach, or suggest a device in which the system axis is spaced from the pivot frame as in claim 1, claim 1 is not anticipated by the Coffin reference. Furthermore, because Coffin fails to disclose, teach, or suggest a device in which the system axis is generally coaxially aligned with one part of the blade assembly when the blade assembly is in a first position and generally coaxially aligned with another part of the blade assembly when the blade assembly is in a second position, as recited in claim 1, claim 1 is not anticipated by the Coffin reference. For at least these reasons, claim 1 is allowable, and Appellants respectfully request that the rejection of claim 1 be withdrawn on these bases.

Dependent claims, by definition, further define the subject matter of the independent claims from which they depend. Because claims 5-7, 9, 11, and 12 depend from claim 1, claims 5-7, 9, 11, and 12 add recitations that further define the subject matter of independent claim 1. Because claim 1 is believed to be allowable for at least the reasons presented above, claims 5-7, 9, 11, and 12 are therefore also believed to be allowable. Consequently, Appellants respectfully request that the rejections of claims 5-7, 9, 11, and 12 be withdrawn.

2. The Examiner's rejection of claims 24-28 under 35 U.S.C. §102(e) as allegedly being anticipated by Coffin is improper.

The Examiner improperly rejected independent claim 24.

As noted above, the invention as defined by claim 24 is directed to a shaving system having a blade assembly, a pivot assembly supporting the blade assembly for movement between first and second positions, and a pivot frame supporting the pivot assembly for pivotal movement about a virtual pivot axis substantially coincident with one part of the blade assembly when the blade assembly is in the first position and substantially coincident with another part of the blade assembly when the blade assembly is in the second position. The blade assembly and the pivot assembly are pivotally movable about the virtual pivot axis in response to shaving force applied to the blade assembly.

The teachings of Coffin are presented above.

Coffin fails to disclose, teach, or suggest a structure in which a pivot assembly is pivotally movable about a virtual pivot axis that is substantially coincident with one part of a blade assembly when the blade assembly is in a first position and substantially coincident with another part of the blade assembly when the blade assembly is in a second position. Coffin has a pivot frame (called a housing) that supports a pivot assembly (called a reusable assembly) that has pivotal movement about an axis 26, but, as stated above, the axis 26 is always in the slot in which the slider is mounted and can never be coaxially aligned with the blade assembly. Thus, movement about the axis 26 is not substantially coincident with one part of a blade assembly when the blade assembly is in a first position and substantially coincident with another part of the blade assembly when the blade assembly is in a second position. Accordingly, because in the Coffin device the pivotal movement of the reusable assembly about the housing is not substantially coincident with one part of a blade assembly when the blade assembly is in a first position and substantially coincident with another part of the blade assembly when the blade assembly is in a second position (as recited in Appellants' claim 24), Coffin cannot be said to disclose each and every element of the device as recited in Appellants' claim 24.

As stated above, to anticipate a claim under 35 U.S.C. §102, a single reference must disclose each and every element or limitation of the claimed invention. Absence from the reference of any claimed element and limitation negates anticipation. Because Coffin fails to disclose, teach, or suggest a device in which a pivot assembly has pivotal movement about a

virtual pivot axis that is substantially coincident with one part of a blade assembly when the blade assembly is in a first position and substantially coincident with another part of the blade assembly when the blade assembly is in a second position as in claim 24, claim 24 is not anticipated by the Coffin reference. For at least this reason, claim 24 is allowable, and Appellants respectfully request that the rejection of claim 24 be withdrawn on this basis.

Dependent claims, by definition, further define the subject matter of the independent claims from which they depend. Because claims 25-28 depend from claim 24, claims 25-28 add recitations that further define the subject matter of independent claim 24. Because claim 24 is believed to be allowable for at least the reason presented above, claims 25-28 are therefore also believed to be allowable. Consequently, Appellants respectfully request that the rejections of claims 25-28 be withdrawn.

C. Claims 8, 10, 20, and 24-34 are patentable within the meaning of 35 U.S.C. §103

1. The Examiner's rejections of claim 8 under 35 U.S.C. §103(a) as allegedly being unpatentable over Coffin and of claim 10 under 35 U.S.C. §103(a) as allegedly being unpatentable over Coffin in view of U.S. Patent No. 6,161,288 to Andrews (hereinafter "Andrews") is improper.

The Examiner improperly rejected claims 8 and 10.

Claims 8 and 10 both depend from claim 1. Claim 1 is asserted to be patentable for at least the reasons presented above. Because claims 8 and 10 depend from claim 1, claims 8 and 10 add recitations that further define the subject matter of independent claim 1. Because claim 1 is believed to be allowable for at least the reasons presented above, claims 8 and 10 are therefore also believed to be allowable. Consequently, Appellants respectfully request that the rejections of claims 8 and 10 be withdrawn on this basis.

2. The Examiner's rejection of claim 20 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,615,498 to King et al. (hereinafter "King") in view of U.S. Patent No. 6,112,412 to Richard (hereinafter "Richard") is improper.

The Examiner improperly rejected claim 20.

As noted above, the invention defined by claim 20 is directed to a triple blade shaving system having a pivot frame; a pivot assembly pivotally coupled to the pivot frame; a blade

assembly pivotally coupled to the pivot assembly; first biasing means between the blade assembly and the pivot assembly; and second biasing means between the pivot assembly and the pivot frame. The blade assembly includes a guard-bar and three blades. The blade assembly further defines a shave plane and also pivots relative to the pivot assembly between a first position and a second position. When in the first position, pivotal movement of the pivot assembly relative to the pivot frame in response to a shaving force applied to the blade assembly causes pivotal movement of the blade assembly about a center axis of the blades, substantially on the shave plane. When in the second position, pivotal movement of the pivot assembly relative to the pivot frame in response to shaving force applied to the blade assembly causes pivotal movement of the blade assembly substantially on the shave plane and about a guard-bar axis of the blade assembly.

King is directed to a razor assembly having a razor cartridge designed for pivotal-, swivel-, and torsional movement during a shaving operation. The razor assembly includes a handle and a flexible member having a first end connected to the handle at a pivot axis (designated A_3) and a second free end extending beyond the handle such that a second axis (designated A_2) extends through the first and second ends of the flexible member. The razor cartridge is pivotally connected to the second free end of the flexible member and pivots about an axis (designated A_1) that is substantially parallel to the axis of the razor cartridge. The second free end of the flexible member and the razor cartridge pivotally connected thereto are movable along an arcuate path centered at the pivot axis A_3 . The flexible member has a first biasing element extending from a flange to engage a bearing surface at the underside of the razor cartridge the razor cartridge also includes a second biasing element with a lower flange.

King fails to disclose, teach, or suggest a shaving system having a blade assembly pivotal relative to a pivot assembly between first and second positions such that when the blade assembly is in either the first or second position, pivotal movement of the pivot assembly relative to a pivot frame in response to a shaving force applied to the blade assembly causes pivotal movement of the blade assembly substantially on the shave plane and about either a center axis of the blade assembly or a guard-bar axis of the blade assembly, as in claim 20. More specifically, when the razor cartridge of the King device pivots in response to a shaving force, any pivotal motion of the flexible member is about axis A_2 or axis A_3 (or both). Because the three axes of the King device each extend orthogonally from each other (i.e., they extend in the x-, y-, and z directions), any shaving force applied to blade assembly to cause the blade assembly to pivot about the axis A_1 either limits the pivoting of

the blade assembly about axis A_1 or causes the additional pivoting of the blade assembly about one or both of the other axes (A_2 and A_3), both of which are orthogonally oriented relative to axis A_1 . Thus, any pivotal movement of the blade assembly is limited to pivotal movement along a single axis. Additional pivotal movement, if any, is oriented along at least one of the other axes, neither of which correspond to either the center axis of the blades or the guard-bar axis. Thus, the King device necessarily cannot pivot about a center axis of the blades in one position and a guard-bar axis in another position because both of those axes are parallel and, even if the axis A_1 corresponds to one of those axes, any other axis about which pivotal motion is effected would be orthogonally positioned.

Richard is directed to a multi-bladed razor cartridge and assembly wherein the razor cartridge includes a frame having an open rear section. The razor cartridge has three razor blades. In one embodiment, a pivot frame includes first and second journal members for pivotal mounting of the razor cartridge.

Richard fails to disclose, teach, or suggest a shaving system having a blade assembly pivotal relative to a pivot assembly between first and second positions such that when the blade assembly is in either the first or second position, pivotal movement of the pivot assembly relative to a pivot frame in response to a shaving force applied to the blade assembly causes pivotal movement of the blade assembly substantially on the shave plane and about either a center axis of the blade assembly or a guard-bar axis of the blade assembly, as in claim 20. The Richard device focuses on problems associated with razor wash-through and is silent with respect to any pivotal movement in any way similar to that recited in the claims of the present invention.

Furthermore, any combination of King and Richard fails to disclose, teach, or suggest a shaving system as recited in claim 20. In particular, because King, which teaches at least some aspects of pivotal movement in a razor assembly, fails to disclose a blade assembly that is pivotal relative to a pivot assembly between first and second positions such that when the blade assembly is in either the first or second position, pivotal movement of the pivot assembly relative to a pivot frame in response to a shaving force applied to the blade assembly causes pivotal movement of the blade assembly substantially on the shave plane and about either a center axis of the blade assembly or a guard-bar axis of the blade assembly, as in claim 20, and because Richard fails to teach anything even remotely relative to the pivotal movement of a blade assembly as in claim 20, any combination of King and Richard necessarily fails to disclose the invention as recited in Appellants' claim 20.

To establish a prima facie case of obviousness for a claimed invention, all the claim limitations must be taught or suggested by the prior art. Because both King and Richard, individually or in any combination, fail to disclose, teach, or suggest what Appellants recited in claim 20, both King and Richard, individually or in combination, fail to teach all of the claim limitations of Applicants' invention. Consequently, because not all of the claim recitations are taught by the cited references or a combination of the cited references, Appellants' claim 20 is necessarily non-obvious, and Appellants respectfully request that the Examiner withdraw the rejection of claim 20.

3. The Examiner's rejection of claims 24-28 under 35 U.S.C. §103(a) as allegedly being unpatentable over King in view of Richard is improper.

The Examiner improperly rejected claim 24.

As stated above, the invention defined by claim 24 is directed to a shaving system having a blade assembly, a pivot assembly supporting the blade assembly for movement between first and second positions, and a pivot frame supporting the pivot assembly for pivotal movement about a virtual pivot axis substantially coincident with one part of the blade assembly when the blade assembly is in the first position and substantially coincident with another part of the blade assembly when the blade assembly is in the second position. The blade assembly and the pivot assembly are pivotally movable about the virtual pivot axis in response to shaving force applied to the blade assembly.

The teachings of King and Richard are both presented above.

King fails to disclose, teach, or suggest a pivot frame supporting a pivot assembly for pivotal movement about a virtual pivot axis substantially coincident with one part of a blade assembly supported on the pivot assembly when the blade assembly is in a first position and substantially coincident with another part of the blade assembly when the blade assembly is in a second position, as recited in claim 24. As stated above with reference to Appellants' argument with regard to claim 20, any pivotal movement of the razor cartridge of the King device is about the A_1 axis. Any pivotal movement about either the A_2 axis or the A_3 axis moves the razor cartridge in a direction that is orthogonal to the direction of pivot relative to the A_1 axis. Accordingly, pivotal movement of the razor cartridge about any axis other than A_1 results in pivotal movement in a direction about an axis that is necessarily not coincident with one part of a blade assembly supported on the pivot assembly when the blade assembly

is in a first position and necessarily not coincident with another part of the blade assembly when the blade assembly is in a second position, as recited in claim 24.

Richard also fails to disclose, teach, or suggest a pivot frame supporting a pivot assembly for pivotal movement about a virtual pivot axis substantially coincident with one part of a blade assembly supported on the pivot assembly when the blade assembly is in a first position and substantially coincident with another part of the blade assembly when the blade assembly is in a second position, as recited in claim 24. As stated above the Richard reference is directed to problems associated with razor wash-through and is silent with respect to any pivotal movement as recited in the claims of the present invention.

Any combination of King and Richard fails to disclose, teach, or suggest a shaving system as recited in claim 24. In particular, because King fails to disclose pivotal movement about a virtual pivot axis substantially coincident with one part of a blade assembly supported on the pivot assembly when the blade assembly is in a first position and substantially coincident with another part of the blade assembly when the blade assembly is in a second position, as in claim 24, and because Richard fails to teach anything even remotely relative to the pivotal movement of a blade assembly as in claim 24, any combination of King and Richard necessarily fails to disclose the invention as recited in Appellants' claim 24.

To establish a prima facie case of obviousness for a claimed invention, all the claim limitations must be taught or suggested by the prior art. Because both King and Richard, individually or in any combination, fail to disclose, teach, or suggest what Appellants recited in claim 24, both King and Richard, individually or in combination, fail to teach all of the claim limitations of Applicants' invention. Consequently, because not all of the claim recitations are taught by the cited references or a combination of the cited references, Appellants' claim 24 is necessarily non-obvious, and Appellants respectfully request that the Examiner withdraw the rejection of claim 24.

Claims that depend from a claim that is non-obvious are themselves necessarily non-obvious. Because claims 25-28 depend from claim 24, and because claim 24 is asserted to be non-obvious for the reasons presented above, claims 25-28 are necessarily non-obvious. Appellants, therefore, respectfully submit that claims 25-28 are allowable. Accordingly, Appellants respectfully request that the rejections of claims 25-28 be withdrawn.

4. The Examiner's rejection of claims 29-34 under 35 U.S.C. §103(a) as allegedly being unpatentable over King in view of Richard is improper.

The Examiner improperly rejected claim 29.

The invention defined by claim 29 is directed to a shaving system having a pivot assembly, a pivot frame supporting the pivot assembly for limited pivotal movement about a virtual axis spaced from the pivot frame and the pivot assembly, and a blade assembly having a guard-bar and a blade group including a plurality of blades. The blade assembly is supported on the pivot assembly for pivotal movement between first and second positions relative to the pivot assembly. The blade assembly also includes one part thereof coaxially aligned with the virtual axis when the blade assembly is in the first position and another part thereof coaxially aligned with the virtual axis when the blade assembly is in the second position.

The teachings of King and Richard are both presented above.

King fails to disclose, teach, or suggest a shaving system having a pivot assembly and a pivot frame supporting the pivot assembly for limited pivotal movement about a virtual axis spaced from the pivot frame and the pivot assembly, as recited in claim 29. As stated above, any pivotal movement of the razor cartridge of the King device is about the A_1 axis. The pivotal movement about this axis is the result of an axle-type connection, which causes the axis to be coincident with the connection. There is no structure that would cause the axis to be spaced from either the pivot frame or the pivot assembly, as in the present invention. Thus, the King reference does not teach the present invention, as recited in claim 29.

Richard also fails to disclose, teach, or suggest a shaving system having a pivot assembly and a pivot frame supporting the pivot assembly for limited pivotal movement about a virtual axis spaced from the pivot frame and the pivot assembly, as recited in claim 29. As stated above the Richard device focuses on problems associated with razor wash-through and is silent with respect to any pivotal movement as recited in the claims of the present invention.

Furthermore, because King does not disclose, teach, or suggest a shaving system having a pivot assembly and a pivot frame supporting the pivot assembly for limited pivotal movement about a virtual axis spaced from the pivot frame and the pivot assembly, and because Richard also does not disclose, teach, or suggest a shaving system having a pivot assembly and a pivot frame supporting the pivot assembly for limited pivotal movement about a virtual axis spaced from the pivot frame and the pivot assembly, any combination thereof also necessarily fails to disclose teach or suggest a shaving system having a pivot assembly and a pivot frame supporting the pivot assembly for limited pivotal movement about a virtual axis spaced from the pivot frame and the pivot assembly.

As stated above, to establish a prima facie case of obviousness for a claimed invention, all the claim limitations must be taught or suggested by the prior art. Because both King and Richard, individually or in any combination, fail to disclose, teach, or suggest what Appellants recited in claim 29, both King and Richard, individually or in combination, fail to teach all of the claim limitations of Applicants' invention. Consequently, because not all of the claim recitations are taught by the cited references or a combination of the cited references, Appellants' claim 29 is necessarily non-obvious, and Appellants respectfully request that the Examiner withdraw the rejection of claim 29.

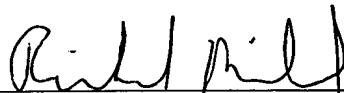
Claims that depend from a claim that is non-obvious are themselves necessarily non-obvious. Because claims 30-34 depend from claim 29, and because claim 29 is asserted to be non-obvious for the reasons presented above, claims 30-34 are necessarily non-obvious. Appellants, therefore, respectfully submit that claims 30-34 are allowable. Accordingly, Appellants respectfully request that the rejections of claims 30-34 be withdrawn.

D. Conclusion

For the reasons discussed above, this application is in a condition for allowance and thus entry of the attached amendment, reversal of the outstanding rejections, and allowance of the application is appropriate.

A check in the amount of \$950.00 is included with the submission of this Appeal Brief in payment of the Appeal Brief filing fee and two-month extension of time. If additional charges are incurred with respect to this Appeal Brief and Amendment Accompanying the Appeal Brief, they may be charged to Deposit Account No. 503342 maintained by Appellants' attorneys.

Respectfully submitted,

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IX. APPENDIX

1. A shaving system, comprising:

a) a pivot frame;

b) a pivot assembly pivotally coupled to said pivot frame for movement relative to said pivot frame about a system axis spaced from said pivot frame and said pivot assembly;

c) a blade assembly pivotally coupled to said pivot assembly for movement between first and second positions relative to said pivot assembly,

said system axis being generally coaxially aligned with one part of said blade assembly when said blade assembly is in its first position and generally coaxially aligned with another part of said blade assembly when said blade assembly is in said second position;

d) first biasing means acting between said blade assembly and said pivot assembly for urging said blade assembly toward and to said first position; and

e) second biasing means acting between said pivot assembly and said pivot frame for resisting pivotal movement of said pivot assembly and said blade assembly in at least one direction of rotation about said system axis.

Claims 2-4 (Cancelled)

5. A shaving system according to claim 1, wherein said first biasing means presents a greater resistance to movement in response to an applied shaving force than said second biasing means.

6. A shaving system according to claim 1, wherein said second biasing means allows pivotal movement of said pivot assembly in either direction of rotation from a rest position relative to said pivot frame.

7. A shaving system according to claim 1, wherein said second biasing means allows pivotal movement of said pivot assembly in only one direction of rotation from a rest position relative to said pivot frame.

8. A shaving system according to claim 1, wherein said second biasing means comprises a cantilevered spring member.

9. A shaving system according to claim 1, wherein said second biasing means includes a cam follower.

10. A shaving system according to claim 1, wherein said blade assembly is pivotally movable through an angle of approximately 45° relative to said pivot assembly.

11. A shaving system according to claim 10, wherein said pivot assembly is pivotally movable through an angle of approximately $\pm 20^{\circ}$ relative to said pivot frame.

12. A shaving system according to claim 10, wherein said pivot assembly is pivotally movable through an angle of approximately 40° relative to said pivot frame.

Claims 13-19 (Cancelled)

20. A triple blade shaving system, comprising:

a) a pivot frame;

b) a pivot assembly pivotally coupled to said pivot frame;

c) a blade assembly pivotally coupled to said pivot assembly;

d) first biasing means between said blade assembly and said pivot assembly; and

e) second biasing means between said pivot assembly and said pivot frame, wherein said blade assembly includes a guard-bar, three blades, defines a shave plane and pivots relative to said pivot assembly between a first position and a second position; and (1) when in said first position pivotal movement of said pivot assembly relative to said pivot frame in response to shaving force applied to said blade assembly causes pivotal movement of said blade assembly about a center axis of said blades, substantially on said shave plane; and (2) when in said second position, pivotal movement of said pivot assembly relative to said pivot frame in response to shaving force applied to said blade assembly causes pivotal movement of said blade assembly substantially on said shave plane and about a guard-bar axis of said blade assembly.

Claims 21-23 (Cancelled)

24. A shaving system comprising;

a blade assembly;

a pivot assembly supporting said blade assembly for movement between first and second positions; and

a pivot frame supporting said pivot assembly for pivotal movement about a virtual pivot axis substantially coincident with one part of said blade assembly when said blade assembly is in said first position and substantially coincident with another part of said blade assembly when said blade assembly is in said second position, said blade assembly and said pivot assembly being pivotally movable about said virtual pivot axis in response to shaving force applied to said blade assembly.

25. A shaving system as set forth in claim 24 wherein said pivot assembly supports said blade assembly for pivotal movement between said first and second positions.

26. A shaving system as set forth in claim 24 including first biasing means acting between said pivot assembly and said blade assembly for urging said blade assembly toward and to said first position.

27. A shaving system as set forth in claim 24 including second biasing means acting between said pivot frame and said pivot assembly for maintaining said blade assembly in a rest position when said shaving system is not in use and acting in opposition to movement of said blade assembly in at least one direction in response to a shaving force applied to said blade assembly during a shaving process.

28. A shaving system as set forth in claim 26 including second biasing means for maintaining said blade assembly in a rest position and yieldably resisting pivotal movement of said blade assembly in at least one direction of movement from said rest position in response to shaving force applied to said blade assembly.

29. A shaving system comprising
a pivot assembly;
a pivot frame supporting said pivot assembly for limited pivotal movement about a virtual axis spaced from said pivot frame and said pivot assembly;
a blade assembly having a guard-bar, a blade group including a plurality of blades, and defining a shave plane, said blade assembly being supported on said pivot assembly for

pivotal movement between first and second positions relative to said pivot assembly, said blade assembly having one part thereof coaxially aligned with said virtual axis when said blade assembly is in said first position and another part thereof coaxially aligned with said virtual axis when said blade assembly is in said second position.

30. A shaving system as set forth in claim 29 wherein said one part comprises a center part of said blade group.

31. A shaving system as set forth in claim 29 wherein said another part comprises said guard-bar.

32. A shaving system as set forth in claim 29 wherein said one part and said virtual axis are substantially disposed within said shave plane when said blade assembly is in said first position and said second position.

33. A shaving system as set forth in claim 29 including first biasing means for urging said blade assembly toward and to said first position.

34. A shaving system as set forth in claim 33 for maintaining said pivot assembly in a rest position when said system is not in use and yieldably resisting rotational movement of said pivot assembly in at least one direction of rotation about said virtual axis in response to shaving force applied to said blade assembly